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FISH AND WILDLIFE SERVICE

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F.W.S. TO USE "TRACER ATOMS"
IN FISH METABOLISM STUDIES

Plans to use radio-isotopes ("tracer atoms") in studying metabolic processes in trout, oysters, and clams were disclosed today by the Fish and Wildlife Service.

The Service reported that Dr. Arthur M. Phillips, Jr., and Dr. Walter A. Chipman, Jr., are now being trained in radio-isotope techniques at the Oak Ridge Institute of Nuclear Studies, Oak Ridge, Tenn.

Dr. Phillips, who is in charge of fish nutrition investigations at the Service's Cortland, N. Y., experimental fish-cultural station, hopes that his use of radio-isotopes in the study of metabolism in trout will help develop more efficient and economic methods of rearing fish in hatcheries.

Dr. Chipman, who is engaged in shellfish investigations at the Service's College Park, Md., laboratory, will use carbon and phosphorus radio-isotopes to study feeding and digestive processes in oysters and clams. He hopes to develop more effective methods of fattening shellfish for market.

Radio-isotopes are ordinary atoms of an element that has been made radioactive by subjection to the intense radiation present in a uranium reactor, or "atomic furnace." They may also be produced in a cyclotron, but in microscopic quantities and at great cost. The Oak Ridge, Tenn., uranium reactor produces radio-isotopes in relatively large quantities and at low cost.

Radio-isotopes are among the most promising of atomic energy's by-products. Scientists have called them the most important research tool developed since the microscope, for they permit the course of atoms to be followed on a practical basis for the first time.

A radio-isotope of calcium, for example, behaves like ordinary calcium. But scientists can trace its tell-tale radiation with a Geiger counter, enabling them to follow it through the complicated chemical and biological processes of metabolism. (Metabolism is the group of processes in living organisms which build up assimilated food materials, and which release energy by breaking the materials down.)

Dr. Phillips and Dr. Chipman are attending the fifth in a series of one-month courses given by the Oak Ridge Institute of Nuclear Studies to provide specialists in varied sciences with a working knowledge of radio-isotopes. They are among 32

scientists attending the current course, and are the first fishery biologists to be trained by the Institute.

A native of Rochester, N. Y., Dr. Phillips is 34-years old and has been in the Fish and Wildlife Service since 1941. He holds B. S. and Ph. D. degrees in biochemistry from Cornell University.

Dr. Chipman is a native of Manchester, N. H., and is 45-years old. He has been employed in the former Bureau of Fisheries and the Fish and Wildlife Service since 1930. He holds B.S. and M.S. degrees in zoology from the University of New Hampshire, and a Ph.D. in physiology from the University of Missouri.

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